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# USSR REPORT

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## CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

### NEW CONSTRUCTION QUALITY CONTROL SYSTEM SUCCESSFUL IN MOSCOW

Moscow MOSKOVSKAYA PRAVDA in Russian 4 Aug 79 p 2

[Article by Oktyabr'skiy Rayon CPSU Committee Secretary B. Selivanov and V. Rycher, Working Group Director, Quality Commission of the Oktyabr'skiy Rayon CPSU Committee: "A House With a Seal of Quality"]

[Text] A house with a Seal of Quality is an honorable and realistic goal of Moscow's house builders. Its attainment requires integrated application of intensive growth factors, the achievements of scientific-technical progress, and the best experience. This goal is the object of the CPSU Central Committee and USSR Council of Ministers decree "On Improving Planning and Intensifying the Influence of the Economic Mechanism on Raising the Effectiveness of Production and Work Quality".

To pose the problem of upgrading construction quality on the firm base of a unified system of standardization, and to generalize and develop all that is best and progressive in the oblast: This was the pledge taken by specialists and party workers of the capital's Oktyabr'skiy Rayon.

The multifaceted work of party and soviet agencies and builders in the capital aimed at implementing the Master Plan and the plan for Moscow's socioeconomic development are producing increasingly more significant results with every year. The level of industrialization, specialization, and concentration of construction and the extent to which scientific-technical achievements and the best forms and methods of organizing the work of the builders are being introduced are growing in compliance with the principal directions elaborated upon in the decree "On Improving Planning and Intensifying the Influence of the Economic Mechanism on Raising the Effectiveness of Production and Work Quality." The material-technical base of construction industry is improving, new series of homes are being built in the city, their construction out of articles from the unified catalog is increasing, and ever-greater use is being made of new materials in their structures and trimmings.



What has been attained in recent years is a good foundation from which to tackle the task posed by the party--to fundamentally improve construction quality. In this period of a major campaign to improve quality indicators, more and more construction collectives of Moscow are coming up with initiatives aimed at upgrading the quality of their construction projects.

As long ago as in 1976 the leading collectives of Mosstroy Trust No 3 and Glavmosstroy [Main Administration for Housing and Civil Engineering Construction in Moscow] Housing Construction Combine No 3 came up with the initiative of building residential buildings with the State Seal of Quality. This was reported in MOSKOVSKAYA PRAVDA. The leading construction collectives naturally wanted to earn the honored pentagon for their products, and to keep up with the best industrial collectives. This initiative was not born in a vacuum. Today all construction collectives are trying to upgrade quality, though with varying success. Some have worked out the methods for preparing for production and the production processes better. Others have established good operational control and self-control by executors using control charts or route logs, and they have been able to submit their completed work without client complaint. A number of organizations have set up good competitions for titles such as "Best in the Occupation" and "High Quality Work Team," and they have organized sponsorship and personnel upgrading programs.

Back in 1976 a number of construction organizations and institutions of the capital's Oktyabr'skiy Rayon made it their goal to collect the best experience in upgrading construction quality, to analyze and generalize it, and on this basis to build a construction quality control system.

A working group of builders, to include specialists of Mosstroy No 3 and Mosorgstroy of Glavmosstroy, the USSR Academy of Sciences Tsentrakademstroy [Central Construction Administration of the USSR Academy of Sciences], Mosstroy Trust No 2 of Glavmospromstroy [not further identified], the USSR Gosstroy Scientific Research Institute of Construction Economics, Gosstandart institutes, the USSR Ministry of Construction, and other organizations, was created in the rayon CPSU committee under the rayon quality commission, which had accumulated a considerable amount of experience in work with the rayon's industrial enterprises. This working group generalized all of the positive experience accumulated in this area by industry and builders of Moscow and the entire country, including enterprises and construction sites of Saratov and L'vov, where a zero defects program and a unified state system of standardization were placed at the foundation of the effort.

Convening weekly, the group worked under the supervision of the rayon CPSU committee, and its plan was approved by the latter. An even broader range of specialists representing scientific research, planning, and contracting organizations, to include the rayon's council of controlling trusts, was called in to develop the system of standards.



This resulted in development of an integrated construction quality control system (KSUKS) for general contractors, special trusts, and associations working in Moscow.

The integrated system provides mutual coordination to technical, economic, organizational, and ideological indoctrination measures. Relying upon the active participation of every worker, from the trust director to the common laborer, this system makes it possible to maintain a unified approach and to actively influence the quality of all phases of the construction.

The system is based on enterprise, sector, and state standards. It will allow builders, as well as industrial workers, to prepare construction projects for quality certification, to include for even the top quality category. In other words builders can state their guarantee to complete the required amount of construction and installation work at a previously planned level of quality, as foreseen by the planning documents and specifications.

Being an inherent part of the overall control system, the KSUKS applies to all subunits and services of a trust, it establishes their mutual relationships, and it embraces all stages of construction--organizational and technical preparation, performance of construction, installation, and special jobs, and operation of the buildings and structures. The system necessarily requires participation in the zero defects program by the executor, self-control, and submission of projects without cause for complaint, without waste and without unfinished jobs. Moral and material stimulation of executors responsible for construction work meeting the required quality level is also foreseen.

Organization, administrative methods, and specifications pertaining to the KSUKS are based on enterprise standards. These standards consist of a complex of norms and requirements imposed on product (job) quality, as well as of the rules for developing, introducing, and operating the system. Enterprise standards pertaining to the principal types of jobs were worked out on the basis of SNIIP [Construction Norms and Regulations] requirements and on sector and departmental standards. They include work quality indicators, requirements on work procedures and the materials employed, the types, methods, and resources of job control, and the rules for organizing acceptance of jobs. The entire complex of standards is reviewed periodically (once every 2 years) with a consideration for experience in developing the system, for improvements in construction procedures, and for higher qualifications of the executors.

The system foresees creation of a quality control division in the trust, using corporate funds and available manning. The structure of the division includes construction laboratories and process engineer and geodesist services. The trust's assistant chief engineer for these problems is the chief of the division.

The division is responsible for quality control of construction jobs and products, and for providing methodological guidance to quality control services; it makes sure that grades given to job quality remain objective, it selects and analyzes quality information, and it evaluates quality in the construction and installation administration and in the trust as a whole. This division also has the right to stop work on a project if SNiP's or planning concepts are violated; it also submits proposals to the management concerning actions to be taken against persons guilty of such violations.

The responsibilities of all other subunits in the KSUKS are spelled out by recommendations and by the basic standard.

The system includes the indicators to be used in evaluating the quality of construction and installation jobs, which afford the possibility for considering and planning improvement of quality. The system requires constant production control over job quality--input control, operational control, reception control, inspection control, and public control.

In March 1977 the Office of the Oktyabr'skiy Rayon CPSU Committee approved an initiative by construction trusts, organizations, and institutions in the rayon to develop the system, and it approved the objectives and the steps to be taken to introduce the system into the trusts responsible for the initiative.

During this time Mosstroy No 3 and Tsentrakademstroy have developed and are now introducing a system including about 50 standards. Quality councils are working actively, "quality days" are being held each month, and integrated plans of measures have been approved.

Trust and construction administration staff, line engineers and technicians, team leaders, and laborers have learned the fundamentals of the system with the help of the working group, specialists of Mosorgstroy and the Scientific Research Institute of Construction Economics, and workers of the Gosstandart, and they have been certified for work within this system. All of this activity is constantly being monitored by the management of trust party committees and by the working group of the rayon CPSU committee's quality commission.

Introduction of the integrated system has not been fully completed yet, but it is already producing positive results. Thus in 1978 Mosstroy No 3 completed 97 percent of its facilities and residential buildings with good and outstanding grades, as opposed to 67 percent in the previous year. In this case all 12 objects of the Olympic Village were completed with good and outstanding grades, and all facilities built in the last 2 years by the Tsentrakademstroy have received nothing but such grades.

The attained results raise our hopes and persuade us of the possibility for applying the system to both housing and standard construction, and to individual industrial and cultural-personal facilities. It "dovetails"

well with the integrated quality control system being introduced at the plants and housing construction combines of the Main Administration of the Building Materials and Structural Parts Industry of the Moscow City Executive Committee.

At the same time a number of problems going beyond the rayon's capacities and depending upon associates and superior organizations are hindering full introduction of the system by it's initiators. More about this in the next article.

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## CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

### PROBLEMS IN IMPLEMENTING TWO-YEAR CONSTRUCTION PLANNING TOLD

#### Obstacles to Two-Year Planning

Moscow PRAVDA in Russian 24 Aug 79 p 2

[Article by Vladimir Sevast'yanov: "With an Uninterrupted Flow"]

[Text] A new idea is seldom accepted at once. More often it is met with suspicion. They did not slam the door on Orel's "nepreryvka" [continuous-planning method] but there were plenty of attacks. Some skeptics who did not agree with it reasoned:

"This is the same as an infringement on the five-year plan."

Orel's builders least of all were inclined to argue. They understood: only by practical application can its correctness be approved. At that time they still did not suspect that they held in their hands a thread that would lead to a new system for planning construction work. Everything would come later: the attention of scientists, approvals, seminars and delegations. But still, only tedious work and a graphic example can help an interesting idea to gain standing. •

Six years ago I went to Orel for the first time. I traveled all over the city. It was afflicted with an abundance of incompleting apartment houses. The blackness of empty window openings induced melancholy. The builders were not especially worried.

"We will clean it all up and turn it over by December."

When the conversation turned to rhythm, more often than not they kept silent. How well they remembered how they had worked. In December they presented to the acceptance commission half or, at times, more of the housing of the annual plan. "Where is it much different?" their perplexed glance seemed to ask.

Actually, where? Data for the past 20 years indicates: the country received only 9 percent of the housing in the first quarter, 20 percent in the second, 23 percent in the third and 40 percent in the fourth. Matters

went still worse at industrial construction projects: almost 80 percent of the enterprises and departments were started up in November or December.

Why is there usually such a difficult situation at the end of the year? What prevents people from working rhythmically the whole year, without crash work? Many things. But primarily deficiencies in planning construction work. It is known that each year lists of construction project titles are compiled and approved anew, contracting agreements are concluded, funding for materials and equipment is formalized, and financing is opened up. But is this necessary, if it disrupts the construction process? At many facilities operations are slowed, and often they cease altogether, in favor of newly planned operations. Funds already expended are frozen, and uncompleted construction grows.

Moreover, the numerous clients--ministries, agencies, enterprises and organizations--split the builders forces up into pieces. The capability that the trust or administration has at its disposal does not interest them. The job falls within the plan, so begin it. Yet meanwhile they do not have enough funds or the design documentation. Bureaucratic interests dictate: the main thing is to lay the footings and get a start on the job. Once it is started, that means that it has to be finished. What the deadline is, does not matter.

This was the situation in which Orel's builders found themselves. And they could scarcely manage to break the settled tradition without the help of the oblast and city party committees. The idea of continuous planning found enthusiastic adherents here. What is the essence of it? The specialists proposed not an annual but a two-year plan for introducing housing into operation, based upon the five-year program and the engineering scheme for the city's development. It was divided into two stages. The program of the first year is operational, the second year--preparatory. At the end of each year a plan is made up for the following two-year period. Only now the plan for the preparatory stage becomes the work stage. A continuous planning flow-line construction group appeared. Thus it was possible to fill in the joints between the current year and the next year, to bind consecutive five-year plan periods to each other with a tight knot.

And the clients, of whom there proved to be about 40 in the city, had to waive their rights somewhat. Their role was taken over by the city soviet of people's deputies. It holds the funds in its hands, and it finances construction projects. The designers work under it from the start. The enterprises obtain apartments based upon the sums of the funds invested. No one is hurt.

This is the structure of the Orel "nepreryvka." It must, of course, be placed on a strong foundation. They expanded the base of a single contractor in the city--the Orel Construction Administration, and they restructured the Orel Housing-Construction Combine. Even the designers' affairs were improved. They made the engineering surveys without haste and they eliminated the overloading that usually arose at the end of the year.



And so the planning, design and construction assembly line in Orel began to operate. The results of this bold step were impressive. The dispersion of capital investment and the "nezavershenka" [uncompleted construction] were done away with, and the potential for creating construction starts in accordance with the norm--the basis of a rhythm--appeared. Now housing is turned over for operation evenly each year. Judge for yourself: 23 percent in the first quarter, 26 in the second, 25 in the third and 26 in the fourth. Moreover, each year the costs of performing construction and installing work are being reduced, and almost all buildings receive good or excellent ratings by the acceptance commission.

And, it goes without saying, the question is legitimate: How has the Orel "nepreryvka" been accepted in the country? It was approved by the CPSU Central Committee. USSR Gosplan and Gosstroy were charged with introducing appropriate revisions into the procedure for planning housing and public-building construction. Changes were experienced, and many normative documents were newly adopted. It is difficult to count all the seminars at which the Orel experience was studied. Publishing houses have issued no few books and brochures. It would seem that the Orel "nepreryvka" has been the subject of adequate attention. And here is how the builders assess it.

First Deputy Chairman of RSFSR Gosstroy S. Dement'yev: "Today's experience indicates that construction-process dynamics come into contradiction with the discontinuous nature of annual planning. The 'nepreryvka' is the organizational form that will help to remove existing contradictions."

K. Gogichaishvili, manager of Trust No 1 of Zakavkazmetallurgstroy [Administration for the Construction of Metallurgical Industry Enterprises in the Caucasus]: "The creation of a planning, design and construction assembly line that follows the Orel precedent has ridded us of crash work. The 'nepreryvka' has had an influence on not only accelerating the introduction of jobs into operation. We turn all apartment houses over with good or excellent ratings." G. Shvartser, chief of the Tallin Housing-Construction Combine: "The Orel 'nepreryvka' has helped all brigades to convert to contracts and they do it by the start-to-finish method."

After such flattering words, one would get the impression that the "nepreryvka" is going about the country with a sweeping stride and is being used widely everywhere. This is not so, although the time for doubting and for testing has long since passed. Today 120 large cities--where the soviets of people's deputies took the thread of control strongly in their hands and became the sole client--are following in Orel's footsteps. Even the Muscovites, who at first were suspicious toward the "nepreryvka," are now wholly for it. And, you see, a rhythm has been achieved. Last year Glavmosstroy [Main Administration for Housing and Public-Building Construction in Moscow City] turned housing over like this: 20 percent in the first quarter, 25 percent in the second, 26 percent in the third and 29 percent in the fourth. The time taken to erect buildings was cut by 15 percent.

An important phenomenon of consistency: use of the Orel system of continuous planning for two years involves large-scale introduction of the

brigade-contract settlement. It is as if they complement each other, enrich each other. Orel, Tallin, Vinnitsa, Murmansk, Yaroslavl', Khar'kov and Donetsk--this combination has appeared especially brightly here perhaps, yielding enormous economic gains. In these and other cities, the planning, design and construction flow line are operating on the principle of economic accountability. Rhythm is the living fabric of the operations, and the result is that facilities are turned over in turnkey fashion.

But our country is vast, and there are thousands of cities, towns and settlements in it. And, of course, 120 of them make up only a small portion. Therefore, it must be affirmed that the Orel "nepreryvka" is being applied weakly. Not everywhere is its essence understood, and there are still skeptics who have not been converted, who stubbornly take the old road. One can be condescending toward such new cities as, say, Surgut, Ekibastuz, Nizhnevartovsk and Angarsk. Here the builders' supply and equipment bases are weak, and the local soviets have not had experience. So it is difficult for them to make a decisive break. But what, let us say, prevents Omsk's builders from taking the new road? Last year it turned over 56 percent of its housing in the fourth quarter. And it did not do so, as we see, without crash work.

Why is it that the Orel "nepreryvka" is not under way in many cities? This is because it requires a major reorganization of affairs and painstaking work, especially in the first stages. And one must be daring to take such a difficult load on one's shoulders. Not everyone decides this at once. People ponder over it a long time, and they take a look at their neighbors. USSR Gosplan and Gosstroy are not compelling, they are only recommending. And so in some places they are marking time.

The situation in industrial and rural construction is especially disturbing. Many rocks have been strwn here in the path of the Orel "nepreryvka." And it is extremely difficult to make one's way through them. But attempts are being made. Experimental application of the continuous system started a year ago in villages in Orlovskaya, Kaluzhskaya, Tul'skaya and Sverdlovskaya oblasts. An order was recently published over the signature of the RSFSR ministers of industrial construction (A. Tokarev) and rural construction (L. Florent'yev) about application of the "nepreryvka" in eight oblasts of Nechernozem'ye [nonchernozem area of the RSFSR]. A good order, well-grounded and well thought out. But matters are proceeding slowly. Why? Dispersion of the jobs and their remoteness from the industrialized base are having their effect. Moreover, rural construction is financed from two sources: state and kolkhoz funds.

The situation in industrial construction, with its abundance of clients and suppliers of materials and equipment and with its complicated operating structure, is still tangled up. But even here the Orellians are looking forward with optimism.

"It is possible, based upon continuous planning and using the methods of mathematical economics, to identify problems accurately for all participants of an industrial construction project, to figure the optimum sequence



for introducing facilities, and to coordinate the work," Orlovskaya Oblast Party Committee Secretary M. Mironov considers.

Well, it is time to set the matter into motion. But not timidly, with the fear of getting burned, but confidently, oriented to the final purpose.

And the purpose is clear. The idea (which has been reinforced by practical affairs), experience, proven legitimacy, and economic consistency of the new method must be made the foundation of the managerial system. And it is inexcusable, for example, that in the nearly 10 years of its existence the brigade contract has not become the norm for the builders' work. The same thing is occurring with the Orel "nepreryvka." Indeed, the economic essence of them is being publicized to the maximum. The new two-year planning method and the contract organization of management have been aimed at the final result--the turnover of facilities for operation in turnkey fashion. No evaluation at all of the amount of funds assimilated, no payment at all for intermediate results!

Excellent! It would seem that it is the right time for USSR Gosplan and USSR Gosstroy to think about how to develop widely the matter that was started by its initiators, how to bring the system that has been developed into being in a legislated procedure. Yet the more actively the "nepreryvka" is asserted, the more numerous the obstacles set before it. How to overcome them? For a long time, for example, the question of building up the single-client service--the capital construction administrations of the city soviets of people's deputies--was posed. Then they were in a position to supplant the corresponding subunits of plants and factories. It was possible to do this at the expense of those same enterprises, by transferring some of the people. Such a step will, first, eliminate duplication in work, and second, enable the release of about 7,000 specialists who can be used in production.

It is time to fine-tune the mechanism for two-year design and planning. Especially now, after the decree of the CPSU Central Committee and the USSR Council of Ministers, "The Improvement of Planning and the Strengthening of the Influence of the Management Mechanism on Raising Production Effectiveness and Work Quality." It defines with precision the path that must be followed. It is important to increase the one-time ceilings on current design. One cannot say that USSR Gosplan does not now give the funds for it. It is allocating them, but at the end of the year. The money is not being assimilated. And the preparatory program must be strongly revised at the stage of acceptance as the operating program. The same thing also occurs with two-year plans. The question about their simultaneous development still has not been resolved. The "nepreryvka" is also getting stuck in confusion about the supplying of materials and equipment. Many city ispolkoms do not have their own bases, so the resources are dispersed among various organizations. The continuous planning, design and construction assembly line should be provided with everything in centralized fashion by USSR Gosstnab subunits.

There are also many other problems. But one thing is clear: the new trends will not be easy to stop, to be kept in the shadows. And so it is better to take a look at them, study them and help to strengthen them. This is what is required of USSR Gosplan and Gosstroy.

Incidentally, this is not without interest: the Orel "neprerывka," like brigade economic accountability, has stepped over the country's borders. It is being applied in Bulgaria, the GDR and Cuba. The Council of Ministers of the People's Republic of Bulgaria has adopted a decree about changes in and additions to capital construction. The basis of it is the Orel experience. But in our country the problem has practically been solved in the low-level and middle echelons. It is a matter for USSR Gosplan. To improve all planning work is to choose the most effective way of achieving high final results for the national economy, which was stressed in the decree of the CPSU Central Committee and the USSR Council of Ministers. The Orel "neprerывka" and the planning, design, and construction assembly line that was created on the basis of it answer this very purpose.

#### Estonia's Two-Year Planning

Tallin SOVETSKAYA ESTONIYA in Russian 14 Jul 79 p 2

[Article by S. Romanov, chief engineer of the Baltic Bureau for the Introduction of USSR Gosstroy TSNIIOIMP: "The Orlov Version"]

[Text] Introduction of the "Orel neprerывka"--the flow-line construction of apartment houses and of facilities for cultural, domestic-amenity and municipal-services purposes--is now being set in our country on a nationwide basis and at a qualitatively new level: last year the USSR Council of Ministers and USSR Gosstroy adopted the appropriate decisions.

From now on, not separate disconnected facilities but complexes, that is, apartment houses and, simultaneously, stores, kindergartens and schools, domestic-services shops, bathhouses and laundries and so on, will be built in cities. Enterprises of the services group, to speak more concretely, should be ready for service first, not last, among the new elements in housing microrayons.

Similar documents have also been adopted in the republic, the Capital Construction Administration of the Tallin city ispolkom having concluded some years ago an agreement with the Baltic Branch of the Office for Introduction of TSNIIOIMP [Central Scientific-Research and Experimental Design Institute for the Organization and Mechanization of and Assistance to Construction] of USSR Gosstroy about extending procedural assistance in solving questions on the given subject. And what are the results? What are today's stands on the Orel experience in Tallin?

One of the main problems has been solved: the Tallin Ispolkom of the SND [Soviet of People's Deputies] is now, through its UKS [Capital Construction Administration] (the chief is K. A. Ekhalo), the sole and fully empowered client for the type of construction that is largest in scale--of apartment houses, which the Tallin Housing-Construction Combine is actually conducting in the improved Sh-121 series of the large-panel variant by

the flow-line method and with enviable steadiness: plans are being over-fulfilled annually and housing is being introduced rhythmically--in practically equal proportions each quarter. This is an undisputed success for all blue-collar and white-collar workers of the Tallin DSK [housing construction combine].

And here is the second component of the complex--the construction of facilities for cultural, domestic and municipal-services purposes. As a rule, this is being executed with a great delay that exceeds substantially the time standards.

What is the matter here?

The answer can be formulated in most general form as follows: apartment houses are being built on an industrialized, factory-built basis, that is, all the structure, articles and parts are manufactured under factory conditions. At the construction site they are merely erected. There is, in essence, no base in Tallin for the construction of facilities for cultural, domestic and municipal purposes. And all the results follow from this. While industrialized articles are used widely in the construction of schools and kindergartens and nurseries, designs for stores, spectator enterprises and so on get to be, during construction, too "involved" and require the use of a large amount of manual labor. And this with a severe shortage of workhands in the city.

The constructional solution to the new apartment houses along the Narva maantee should be named as a tribute to the old, obsolescent method of construction, "masonry style." This is the pre-Olympic construction on the "Olympic" street. What is new about these apartment houses? Nothing, except the wasteful use of the labor of the construction workers!

The apartment houses at the Narva maantee could have been completely solved with the large-panel variant. The architects of Estonproyekt's GPI [State Design Institute] and the Tallin DSK had only to work amicably on the three-dimensional solution and the decorative appearance of these buildings. But alas: there is no creative friendship between these organizations or among their specialists. But there should be.

It became necessary long ago to create in the city a /single design-and-construction combine [in boldface]./ Scientific workers could have worked here, determining the prospects for promoting a modern development of Estonia's cities on the basis of industrialization and flow-line methods. The benefit would have been indisputable. But the problem still is not being solved.

And so it turns out that the DSK builders solve their problems with the use of large-panel construction, which, incidentally, makes up 70-80 percent of the total volume of development, but the best architects of Estonproyekt solve theirs according to the old fashion, using brick and binding the builders to archaic methods of construction.

Moreover. In Tallin, in our opinion, it is fully desirable to build new departments for the manufacture of large panels in order to support the overwhelming amount of new facilities for social, cultural, domestic-amenity and municipal-services purposes. It stands to reason that this must be done not to the detriment of the city's architectural appearance. In this case, all these facilities could be included in a single flow line of the Tallin DSK for the development of the city's housing formations. /The Tallin DSK would thus be converted into the unified general developer for the city of Tallin [in boldface]./ The output of the new department could be exported also to other cities of the republic.

All this would enable the creation in Tallin of three main support points, or "the three runners," on which the system of continuous planning--the "Orel nepreryvka"--is based. Namely, a single client--the UKS of the ispolkom of Tallin's SND, a single city designer--Estonproyeckt's GPI, and a single contractor for city development--Tallin's DSK.

In so doing, a basic, unified policy for urban development should be executed by Estonproyeckt's GPI, jointly with the city's Architectural and Layout Administration. The main coordination center should be here, and all the basic architectural and layout work on the implementation of the master-plan solutions, as well as the revising of the master plan itself, should be concentrated here.

Tallinstroy [Tallin Construction Trust] is assigned the construction of new and the rebuilding of old industrial enterprises, as well as of specially built facilities.

With a view to diversifying the architectural aspect of our old but eternally young Tallin, designers of Estonproyeckt's GPI and other design organizations evidently should recommend for the builders the mastery and use in the nearest future (more precisely, within the Eleventh Five-Year Plan) of the method of lifting floors and ceiling floors, and also of construction with monolithic concrete. Both of these methods will enable jobs of practically any three-dimensional layout solution to be erected, and they are especially valuable in the Old City environment, where construction-site dimensions are restricted.

A number of other unsolved problems that negatively affect successful introduction of the "Orel nepreryvka" can also be singled out.

First, is the problem of supplying the construction project on time with design and budget-estimating documentation.

For even on 1 January 1978, that is, after approval of the annual plan for construction work, Tallinstroy lacked the technical documentation for 7.6 million rubles' worth of work, or 30 percent of the total amount. For 1979, the situation was still worse. There are similar examples also for Stroymekhanizatsiya [Trust for the Mechanization of Construction Work]. The guilty here, as a rule, are the client agencies. They are still not in a position to give on time the data necessary for designing specific



facilities, even for the planned year, let alone for later years. Let us say that right now it is not possible to obtain even a rough listing of the amount of construction and installing work for facilities that are supposed to be built in 1980. And here it is July already.

Second, the question of the quality of plans for design, surveying, construction and installing work is now rising to its full height. At present, plans for construction and installing work do not in many cases actually define either the volume or pace of construction of the facilities.

And it is understandable: these are greatly "revised" in accordance with the results of the preceding year, so the builders barely get them in April. No reliable criteria of any kind exist for evaluating the quality of the designs. It is doubtful whether one should expect some nationwide criteria here. Apparently, each territorial region should develop its own method for evaluating design solutions. This is a job, obviously, for ESSR [Estonian SSR] Gosstroy, jointly with Minstroy [Ministry of Construction] and the Scientific and Technical Society of the Construction Industry.

Third, problems of the evenness of operation of construction organizations and of introduction into operation are still urgent.

An analysis of progress in the construction of facilities for social, cultural and domestic-amenity purposes performed by the city ispolkom's UKS for 1978 indicates that of 27 Tallinstroy jobs, only for two of them did the planned volume of construction and installing operations, for example, in the first quarter, correspond to actual fulfillment. Why so? The low quality of annual plans, the untimely delivery of building materials and structure or of industrial equipment—these are the reasons. And so the builders often build not where it is necessary but where it is possible. They have no other choice, except idleness. The same picture was observed also in Stroymekhanizatsiya, where, for all 20 jobs, the planned volume did not correspond to the actual volume. The causes: the corrected plan was received too late—12 April (that is, for almost 4 months there was no plan!), the late transmittal of design and estimating documentation, and so on.

Finally, the lack of a provisioning of materials and equipment that is reliable and of guaranteed timeliness and the lack of completeness of shipments should be noted.

The incompleteness of shipments and their untimeliness are still fairly ordinary phenomena. An unfortunate practice has prevailed: its essence is that orders for the required amount and quality of materials and articles are completed prior to the receipt of the design and budget-estimating documentation—the basis for such orders. This is not sufficiently compensated for by the second round, during the compilation of specific requisitions, but only for those facilities at which technical documentation in the full amount exists.

Such a practice can still be justified where there are standard reserves or reserves of material resources for the whole required products mix. But there is still not enough, and the existing practice cannot serve as a reliable base for shipping complete sets of everything required to the construction project.

Moreover, there also exists duplication in supply organs for capital construction which should have been eliminated long ago. All new construction and overhaul that are conducted along the lines of the city ispolkoms of SND's are accomplished by the Main Administration for Supplying Materials and Equipment of ESSR Minkomkhoz [Ministry of Municipal Services] and, for contracting organizations of ESSR Ministroy, by ESSR Glavsnab [Main Administration for Supplying Materials and Equipment]. In our view, all provisioning of material and equipment resources for capital construction and overhaul should be transferred to one organ--ESSR Gosplan. Leaving for Glavkom [Main Administration for Municipal Services] of ESSR Minkomkhoz the provisioning of materials for the operation of buildings and structures of the municipal services of ESSR cities and villages.

Further strengthening of republic organs, primarily of ESSR Gosplan, Gosstroy and Ministroy, is required for further improvement of continuous planning.

It would appear that these measures will enable the green light to be lit for the "Orel nepreryvka" road.

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## CONSTRUCTION, CONSTRUCTION MACHINERY AND BUILDING MATERIALS

### RESERVES FOR LOWERING COST AND RAISING QUALITY OF HOUSING CONSTRUCTION

Moscow FINANSY SSSR in Russian No 7, Jul 79 pp 39-41

[Article by G. Ye. Murzagaliyev, manager of Kazakh republic office of USSR Stroybank: "Reserves for Lowering the Cost and Raising the Quality of Housing Construction"]

[Text] The decisions handed down during the November (1978) Plenum of the CC CPSU and the Tenth Session of the USSR Supreme Soviet called for further improvements in housing and domestic conditions. During 1979, 620,000 individuals will improve their housing conditions in Kazakhstan. The solving of an important social problem will become more realistic -- that of providing every Soviet family with a separate and comfortable apartment. Tens of new cities have appeared and the appearance of the old cities has changed beyond recognition. The builders and planners are employing a creative approach in achieving their architectural-planning and design solutions.

The best example of modern city construction is the city of Shevchenko, which arose and is being developed in one of the most uninhabited regions of Kazakhstan. It is the only city in the country which exists exclusively on "artificial" water, obtained from the Caspian Sea with the aid of distillation units which use energy from the world's first atomic reactor. In 1977, the collective of architects, designers and builders which created the city's architectural ensemble was awarded the State Prize of the USSR. Many other works by our architects have been accorded high recognition. The State Prize of the USSR was awarded to two facilities built in the republic's capital: the Palace imeni V.I. Lenin and the unique Medeo Ice Complex. The Prize of the USSR Council of Ministers was awarded for the building plan for the city of Balkhash.

Questions concerned with the republic's economic and social development were discussed during the Ninth Session of the Supreme Soviet of Kazakhstan, which convened in December 1978. In particular, it was noted that a great program of production, housing-municipal and cultural-domestic construction has been carried out during the years of the Tenth Five-Year Plan; during 3 years of



the five-year plan, 21.7 billion rubles were invested in national economic development. New and large enterprises, departments and projects possessing high technical levels and leading technologies were placed in operation and 18.5 million square meters of overall living space will be built using all sources of financing. The session approved the state plan for the economic and social development of the Kazakh SSR for 1979; the plan calls for a volume of capital investments, for all financing sources, of more than 7.8 billion rubles, including state capital investments of almost 6.7 billion rubles. Dwellings representing an overall area of 6.2 million square meters of space will be built using all sources of financing.

The construction of housing throughout the republic is being carried out mainly by specialized construction-installation organizations and house-building combines. New efficient materials and progressive structures are being introduced into operations on a more extensive scale. Leading methods for the organization of labor, improvements in labor productivity and the industrialization and mechanization of production processes are ensuring a high tempo for construction operations. During the years of the Tenth Five-Year Plan, approximately 2.96 billion rubles of state and cooperative funds were allocated for residential housing construction throughout the republic. These funds were used for building 12 million square meters of housing space, kindergartens and nurseries for more than 57,000 children, general educational schools for 199,000 pupils, hospitals for almost 5,000 beds and many projects of a trade, domestic and municipal nature.

As the scale of residential housing construction has increased, the problems concerned with the effective use of capital investments have become more acute. In order to establish a rational trend in the use of capital investments allocated for housing construction, the institutes of Stroybank studied its structure and cost in oblast centers and other cities throughout the republic. A general analysis revealed that considerable reserves are available here for raising the effectiveness of capital investments allocated for this purpose. One of the main reserves for lowering capital investments and reducing the construction schedules is that of further developing the industrialization of housing construction. The cost difference for 1 square meter of dwelling space between large-panel and brick homes is 40.4 rubles. However, the proportion of large-panel dwellings is still low and amounts to 55 percent of the overall area of dwelling construction. In a number of cities (Gur'yev, Kzyl-Orda, Dzhezkazgan, Kokchetav), the capabilities of the large-panel house-construction enterprises are being employed to 50-60 percent, for the Ministry of Heavy Construction for Kazakhstan as a whole -- to 77.7 percent and for the Ministry of Rural Construction -- to 67.9 percent.

Considerable reserves for lowering the cost of construction are to be found in the proper selection of the number of floors for dwellings. An analysis of the structure and cost of housing construction has revealed that five-story dwellings are the most economical: here the cost of one square meter

is 39 rubles lower than that for 6-8 story buildings and 7 rubles less than nine-story dwellings. More than 15 percent of the dwellings in the republic will be built on the basis of individual plans. A reduction in their proportion of just 50 percent will make it possible to reduce the estimated cost for one square meter of overall area by 55 rubles. Approval of the planned structure for housing construction and the estimated cost for one square meter of overall dwelling space, simultaneously with approval of the five-year plan for the economic and social development of the republic would make it possible to plan the use of the funds allocated in a correct and more rational manner.

The effectiveness of capital investments is associated closely with the quality of the construction work. In connection with improving quality, a great role is played by converting over to the construction of dwellings using new standard plans having a higher level of comfort. By the end of 1980, the plans call for the construction of such dwellings to be raised to 60 percent of the overall volume. In order to ensure completion of this task, schedules were defined for converting eight large-panel house-construction enterprises over to the production of components for new dwelling series, for an overall area of 1.24 million square meters annually. However, the tasks for modernizing the house-construction combines were not fulfilled. The conversion of house-construction combines over to the production of dwelling components for new series was not carried out in the cities of Karaganda, Dzhambul and Chirchik and it was only partially carried out in Aktyubinsk and Pavlodar. In 1977, new standard plans were employed in oblast cities of Kazakhstan for the construction of 649,300 square meters of dwelling space, or 37 percent of the overall dwelling construction area and in 1978 -- 734,600 square meters, or 40 percent.

The tremendous amount of resources released for the construction of residential housing projects requires a high level of responsibility for ensuring their effective utilization and particularly during the planning stage. Despite improvements noted in the quality of planning on the whole, serious shortcomings still persist in the work being performed by individual planning organizations. During the first 6 months of 1978 alone, planning estimates documentation for 46 projects in the republic was revised, with the cost of these projects being increased by 15 percent. Planning-estimates documentation is not being furnished for residential housing construction projects in a timely manner. It was for this reason that, over a period of 7 months during 1978, financing was not provided for 27 projects in the republic representing a capital investment volume of 7.8 million rubles. Against an average norm of 9 months, the erection of the dwellings is requiring from 12 to 18 months.

A considerable number of projects for which the planning organizations issued technical documentation are not being financed in view of the fact that the planning estimates documentation is of low quality, the opportunities for raising labor productivity are not sufficiently reflected in the plans and the large volumes of structures called for can only be

supplied if use is made of heavy manual labor. The planning organizations must improve the quality of the construction planning and they must utilize scientific and engineering achievements to a maximum degree. The non-rhythmic placing in operation of housing space causes substantial harm to the quality of the construction work being carried out throughout the republic. As a rule, the majority of the homes are placed in operation during the last days in December. Such structures are turned over at any cost and to the detriment of quality. The prolonged elimination of imperfections and defects tends to extend the periods for populating the dwellings.

The construction organizations and customers, in striving to avoid sanctions and other punitive measures by the institutes of USSR Stroybank, which carry out inspections on the completeness and quality of the work performed prior to payment, refrain for an extended period of time from presenting the bank with bills for payment and documents attesting to work performed in accordance with projects placed in operation and included in the accounting operations. On 10 January 1978, the payment documents for 251 dwellings representing an area of 309,000 square meters and an estimated cost of 84.7 million rubles were not presented for payment and payment was declined owing to imperfections and by 1 February 1978 the number of such dwellings had been reduced to 150, with an overall area of 298,000 square meters and an estimated cost of 45 million rubles. The ministries and departments of the Kazakh SSR and the oblast (municipal) executive committees, taking into account the raised requirements during this current five-year plan with regard to work quality, must not tolerate the approval of documents by state committees for the placing in operation of unfinished construction projects and they must ensure that the officials responsible for the violations are properly punished.

Shortcomings in the quality of residential housing construction underscore the need for solving the problem regarding customers. Numerous enterprises, organizations and departments are presently performing in the role of customers. The majority of them lack adequate resources and experience in working with a general contractor and planning organizations. This leads to a dragging out of the construction schedules and to disruption of the principle of completeness in city building plans. Services are being created throughout the republic for a single customer and organizations are also being tasked with carrying out the functions of a single customer and general contractor. The method of continuous planning and flow-line construction has already been introduced into operations in two of the republic's cities -- Karaganda and Pavlodar. However, the oblast executive committees are not carrying out this work to a sufficient degree in other cities.

An important element in the complex of measures aimed at raising the effectiveness and quality of construction is that of converting over to the brigade contract method, the introduction of which is reducing the construction schedules considerably, raising labor productivity and lowering

the cost of construction-installation work. In all, the method of Hero of Socialist Labor Comrade Ziobin is being employed throughout the republic by more than 3,000 brigades, or 32 percent. In 1977, in Mintyazhstroy [Ministry of Heavy Construction] for the Kazakh SSR, the brigade contract method was used by 1,129 brigades, or 32 percent of the overall number and in Minmontazhspestroy [Ministry of Installation and Special Construction Work] -- 582 and 34 percent respectively. In 1979, 1,122 brigades in Mintyazhstroy were converted over to the new form of economic accountability and in Minmontazhspestroy -- 514. The proportion of the work volume carried out by such brigades during the first 6 months of 1978 was: for Mintyazhstroy -- 30.7 percent and Minmontazhspestroy -- 19.4 percent.

The brigade of installers at the Alma-Ata House Construction Combine headed by laureate of the State Prize of the USSR, Comrade Satayev, is well known far beyond the boundaries of the enterprise. It is distinguished by stable and high technical-economic results, efficiency, good work organization and outstanding quality in its completed work. The new brigade method has been mastered at the Sokolovskrudstroy, Kazmetallurgstroy and Aitayvinetstroy trusts. The Sokolovskrudstroy Trust is the leading one. High indices have been achieved by the brigades headed by A.D. Naymushin, S.A. Dergach, V.Ye. Makovetskiy and S.A. Grinev. During 1976 and 1977, the brigade headed by Naymushin turned over six dwellings representing an area of 26,500 square meters, with the quality of the units being graded as outstanding and good. Moreover, 4.9 cubic meters of units were produced during a shift against a plan calling for only 3.45 cubic meters and 41,000 rubles of above-plan profit were obtained. In 1978, there were 53 brigades using the contract method at the Sokolovskrudstroy Trust; they carried out more than 55 percent of the work volume. Over a period of a number of years, the Petropavlovskstroy Trust has constantly been fulfilling its plans for construction-installation work and for raising labor productivity; 60 percent of the brigades have been operating on the basis of contract economic accountability. In 1977, they placed dwellings in operation representing an overall area of 60,000 square meters, a school, a number of work stages at industrial projects and they realized savings of more than 64,000 rubles. However, the contract method is still not being employed sufficiently in residential housing construction.

The economic leaders must display good initiative in terms of furnishing support and proper attention. Thus, for the purpose of increasing the use of the contract method, daily and laborious work is required in particular by the specialists attached to ministries, main administrative boards, trusts and administrations.

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## CONSTRUCTION, CONSTRUCTION MACHINERY AND BUILDING MATERIALS

### FINANCING AND CREDIT FOR COOPERATIVE AND INDIVIDUAL HOUSING CONSTRUCTION

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[Article by D.S. Pudikov, chief of the Department for Long-Term Credit for Cooperative and Individual Housing Construction of USSR Stroybank: "Control Over Financing and Credit Arrangements for Cooperative and Individual Housing Construction"]

[Text] Attaching great importance to cooperative housing construction and recognizing that the entrance of citizens into ZhSK's [housing construction cooperative] is attended by material expenditures, the CC CPSU and the Soviet Government have in recent years adopted a number of decrees calling for substantial privileges to be granted to cooperatives. This has made it possible to attract a considerable number of citizens into housing-construction cooperatives. At the present time, there is not one city in which ZhSK's are not being erected. They are even to be found in workers' settlements and in the rural areas.

In his speech delivered before the July (1978) Plenum of the CC CPSU, entitled "Further Development of Agriculture in the USSR," L.I. Brezhnev emphasized: "A correct approach must be employed for rural construction and the living conditions and interests of the rural population must be taken into account. It is obvious that rural construction as a rule should be oriented towards providing families with comfortable individual homes having private plots, outbuildings for livestock and poultry and personally owned vehicles. Special importance is attached to ensuring the development of individual and cooperative housing construction, with use being made of the resources of the rural population. A decree was adopted in this regard calling for measures aimed at stimulating favorable long-term credit for individual housing construction."

The conversion over to housing cooperation is viewed as a natural process for our rural areas, since rural workers wish to live in apartments equipped with all conveniences. The development of ZhSK's in the rural areas began in Moscow Oblast based upon initiative displayed by the party and soviet organizations.

The USSR Council of Ministers has authorized Mosoblispolkom [Executive Committee of the Moscow Oblast Soviet of Workers' Deputies] to permit housing construction cooperatives that have been organized in Moscow Oblast to build, in addition to multi-apartment dwellings, one and two apartment buildings (with private plots), while taking into account the plans for populated points in the rural areas. The leaders of sovkhozes and other state enterprises located in the rural areas of Moscow Oblast were also authorized to make repayment for up to 20 percent of the credit issued, based upon an agreement with the professional trade union organizations and using the fund for social-cultural measures and housing construction (for enterprises which did not convert over to the new conditions for planning and economic incentives -- using the fund for enterprises, and for sovkhozes which did not convert over to complete economic accountability -- using the fund for farm strengthening and expansion). Credit is issued to manual and office workers -- members of a ZhSK -- upon the condition that they worked at the particular enterprise (sovkhoz) for no less than 10 years prior to joining the cooperative. In addition, Mosoblispolkom is authorized to establish favorable credit conditions for cooperatives in the rural areas of Moscow Oblast. The agricultural workers -- members of a ZhSK -- are entitled to obtain credit amounting to 70 percent of the cost of a home and to repay this credit in equal amounts over a period of 10-20 years.

Subsequently, rural cooperative housing construction became further developed in the RSFSR and in the Lithuanian, Latvian, Estonian, Belorussian, Ukrainian and Uzbek republics. For the most part, the same conditions applied in these areas. At the present time, more than 1,400 ZhSK's have been organized throughout the country; approximately 9,026 homes representing an overall area of 76.79 million square meters of space have been built in connection with these ZhSK's. In particular, many rural cooperatives have been established in the Lithuanian SSR -- 579, the Uzbek SSR -- 472 and in the Latvian SSR -- 149. Great prospects exist for the development of ZhSK's in the rural areas. Many of them will be organized in the nonchernozem zone of the RSFSR.

The state is investing considerable resources in the implementation of a complex of measures aimed at improving living conditions and daily routine in the rural areas. The task has been established of reorganizing the rural areas and transforming them into large and well organized settlements. This requires the carrying out of a tremendous amount of work. The greatest number of inhabitants are concentrated in the so-called presently existing promising settlements, which will undergo further development. They will be radically modernized and expanded. Here, new centers will be erected and blocks of municipal type dwellings, clubs, schools, hospitals and trade and domestic enterprises will be built.

Great importance is being attached to the building of homes on cooperative basis. Complex changes will take place in the rural areas. In this regard, it should be mentioned that questions concerned with the activities of ZhSK's must be reflected in the model regulations of housing construction

cooperatives, as approved by the councils of ministers of the union republics. Nor are ZhSK's being organized only at sovkhoses at the present time. The possibility has also developed of creating them at kolkhoses and this should also be reflected in the model regulations. At the present time, this method for organizing ZhSK's in the rural areas has been defined in the model regulations for the Lithuanian, Latvian and Uzbek SSR's.

Credit for the construction of ZhSK homes at kolkhoses is presented under the same conditions as those employed for sovkhoses. Moreover, it should be borne in mind that the building plans for populated points in rural areas must be carried out on a complex basis taking into account all of the projected plans and the credit is arranged in conformity with the planning-estimates documentation, developed for the building plan complex and for each enterprise taking into account the homes and structures required by it. The load so issued is repaid following completion of construction of the entire complex. If in addition to dwellings, the plan calls for auxiliary facilities (barns, garages and so forth), the expenses for their construction can also be financed. This cannot be done in the case of ZhSK homes built in cities.

However, such construction has still not commenced in a number of republics. Certainly, a great amount of thought must be given to this complicated social problem; it must not be solved in haste. What then is preventing the tempo of rural cooperative housing construction from being increased? Checks carried out in many areas have revealed that it is not being evaluated properly. One restraining factor is the high cost of homes for rural cooperatives. In addition, the land tracts allocated for such a building plan do not always satisfy the members of the cooperatives being created. Such situations were observed, for example, in the Belorussian, Estonian and Ukrainian SSR's.

Quite often the planning organizations do not cope with the orders for a ZhSK with regard to coordinating the standard plans. Moreover, quite often the planning-estimates documentation is late in being delivered to many cooperatives. Model analogs of housing series deemed economically suitable for the rural areas are either non-existent or very few in number. A very adverse influence is generated by the absence in a number of areas of an industrial base for construction in the rural areas, by untimely deliveries of materials and equipment, by manpower shortages and by poor utilization of local materials. For example, the principal volume of construction work in the Latvian SSR (up to 75 percent) is being carried out by the construction brigades of kolkhoses and sovkhoses using the economic method. Owing to an absence of manpower, weak mechanization and a large volume of seasonal agricultural work, these brigades are failing to devote proper attention to rural cooperative housing construction. The institutes of the bank are studying thoroughly the prospects for developing cooperative housing construction in the rural areas and they are submitting proposals for consideration by the party and soviet organs, particularly in connection with the creation of the logistical base.



A new form of cooperative construction is that of home construction by enlarged ZhSK's. They are created by joining together existing cooperatives on a voluntary basis. Experience has shown that in enlarged ZhSK's having skilled housing administrative systems considerable reductions can be achieved in expenditures for servicing the homes and solutions can be obtained more readily for those problems concerned with their construction and operation. The advantages of this new form for the construction and operation of cooperative homes has had a very favorable effect on relationships between the bank and the ZhSK's during the construction of new homes and during the period of making payments for loans issued.

At the present time, the institutes of the bank have been assigned the task of studying and disseminating the experience of enlarged ZhSK's to other cooperatives. It is generally known that there is a paid worker in each ZhSK today. More often than not, this is the bookkeeper, cashier or chairman of the board. When one considers that there are 1,658 ZhSK's in Moscow, 1,159 in Leningrad, 579 in Kiev, 382 in Minsk, 314 in Tbilisi, 340 in Sverdlovsk and 213 in Odessa, then the opportunities that have become available for reducing the administrative apparatus, coincidental with the appearance of enlarged ZhSK's, are readily apparent. For example, the active cooperatives in Moscow could be joined together into 165 ZhSK's and in Sverdlovsk -- into 34. This is one side of the problem. The other side, and an equally important one, is that of reducing the great flow of various types of accounting documents which are presented by a ZhSK to the financing bank during the period of home construction and also the introduction of office work within the cooperative itself. Since the proportion of cooperative housing construction will constantly increase during the tenth and subsequent five-year plans, the importance being attached to further enlarging the ZhSK's is readily understood.

The new form of construction must be disseminated widely within cooperative housing construction. This is mainly of interest to the ZhSK's themselves, since the principal advantage of such cooperatives lies in the thrifty expenditure of resources, for example operating expenses. The cost of operating expenses per square meter of area, in houses of enlarged ZhSK's at Chelyabinsk, was 8-10 kopecks and in houses not belonging to enlarged ZhSK's -- 11-16 kopecks; for Sverdlovsk, the figures are 10 and 13 kopecks respectively; Kiev -- 10.3 and 21.5 kopecks; Minsk -- 15.2 and 49 kopecks; Tashkent -- 10 and 12.5 kopecks; Grodenskaya Oblast -- 11 and 23 kopecks and so forth.

Each year, individual dwellings representing an overall area of more than 1 million square meters are being erected for workers in cities and settlements of the municipal type. Hence, individual construction, together with state and cooperative construction is of great importance for improving the living conditions of the population. In carrying out its daily work, Stroybank exercises strict control to ensure that the construction schedules for ZhSK dwellings, as called for in the agreements established with contracting organizations, conform to the existing norms

for construction duration. When these norms are violated, the workers of Stroybank require the organs to which the contracting organizations are subordinate to introduce the required changes into the plan for construction-installation work and they also require the housing-construction cooperatives or the appropriate departments (administrations) of executive committees and contractual organizations -- to introduce changes into the title lists and contractual agreements for capital construction. They monitor the planning-estimates documentation and the correctness of its approval and quality.

However, the practice of financing and issuing credit for cooperative and individual housing construction reveals that serious shortcomings exist here and that the opportunities available for carrying out the credit plans and placing in operation an overall area of cooperative and individual dwellings are not being realized fully. Notwithstanding the great demand for such apartments (on 1 January 1978 -- more than 1 million unsatisfied applications for admission to a cooperative), the plans for cooperative housing construction are still not being carried out from year to year. During the Seventh Five-Year Plan, the plan for placing usable ZhSK dwelling space in operation was fulfilled by 79 percent, during the Eighth Five-Year Plan -- by 77 and during the Ninth Five-Year Plan -- by 92 percent. As a result, during these years the cooperatives fell short by 12 million square meters of usable space. The total amount of unused state credit for this purpose amounted to more than 1 billion rubles. A falling behind was also tolerated with regard to individual housing construction. In 1978, the planned tasks for placing cooperative and individual areas in operation were not carried out. The situation with regard to placing ZhSK dwellings in operation in the Kirghiz SSR was especially unsatisfactory -- 39 percent, Azerbaijan SSR -- 48 percent and Moldavian SSR -- 55 percent.

One reason for the unfavorable course of cooperative housing construction has been shortcomings in the planning of such construction. Each year, dwellings are included in the plan for which no prepared sectors have been made available, approved planning-estimates documentation is lacking and in many instances the capabilities of the contracting organizations are inadequate. It was for these reasons that construction work was never started on a considerable number of ZhSK dwellings. For example, in 1976 financing was not provided for 296 of 3,912 dwellings included in the plan, in 1977 -- 385 of 4,236. Nevertheless, a large number of such dwellings were included in the 1978 plan.

As a result of non-fulfillment by the contracting organizations of their planned tasks for building cooperative dwellings, the actual schedules for building a number of such dwellings exceed the normative schedules to an appreciable degree. The construction schedules are being violated for dwellings being erected in the Georgian, Azerbaijan, Uzbek, Kirghiz and Moldavian SSR's, in Bryanskaya, Kurganskaya, Kostromskaya, Penzenskaya, Permskaya, Kemerovskaya and Kaliningradskaya oblasts and also in Krasnodarskiy and Stavropol'skiy krais. For example, the construction of

ZhSK-23 (Tyumen') dwellings has been underway since 1973, ZhSK "Druzhba" (Novosibirsk) -- since 1974 and ZhSK-106 (Bryansk), ZhSK-7 (Anapa in Krasnodarskiy Kray), ZhSK-15 (Michurinsk in Tambovskaya Oblast) -- since 1975. The schedules for placing them in operation were disrupted during the first 6 months of 1978.

Under these conditions, the bank must undertake strict measures aimed at eliminating the shortcomings noted in the planning of cooperative housing construction and it must monitor the timely arranging of financing for ZhSK dwellings included in the plan. Meanwhile, many institutes of the bank are failing to correct these shortcomings in a rapid manner and only rarely do they inform the councils of ministers and other leading organs regarding their existence. The republic offices are still exercising only weak control over the work of subordinate bank institutes in connection with the financing and issuing of credit for cooperative and individual housing construction, they are not listening to reports by office and department leaders regarding measures they have undertaken and only rarely are visits being made to the various areas for the purpose of furnishing practical assistance. In particular, this work was organized very poorly in the Georgian, Kirghiz and Estonian republic offices and considerable neglect has been observed in the Belorussian, Ukrainian and Kazakh republic offices.

Inspections have borne out the fact that the bank has not been making sufficient use of the right extended to it to employ sanctions for the non-fulfillment of planned tasks for ZhSK dwellings. The materials on contractors guilty of disrupting the tasks for placing cooperative dwellings in operation are not being transferred to the organs of arbitration in all instances. Thus, during the first 6 months of 1978, materials on non-fulfillment of the planned tasks for cooperative housing construction were sent to the organs of arbitration only by the Gor'kiy, Moscow, Saratov, Rostov and Tyumen' oblast offices. Nothing has been done in this regard at the Belorussian, Armenian, Turkmen republic offices, at the Pskovskaya, Astrakhanskaya, Smolenskaya oblast offices or at the Karelian republic office of the bank.

The bank must exercise increased control over the quality of construction for the ZhSK dwellings and all imperfections and defects must be eliminated in a timely manner. Incidents involving the delivery of cooperative dwellings having imperfections have been observed taking place in the Georgian, Kazakh, Moldavian and Tadzhik republics and also in Ul'yanovskaya, Tomskaya, Tambovskaya, Permskaya and Ivanovskaya oblasts. In a number of republics, rural housing-construction cooperation is developing in a poor manner. During the 1976-1978 period, not one ZhSK was created in the rural areas in many oblasts of the Ukraine and the RSFSR. Cooperatives are being organized extremely slowly in the Belorussian SSR. In the case of just one rural ZhSK being created in Mogilevskaya, Gomel'skaya and Brestskaya oblasts, the Belorussian republic office of the bank failed to study the potential for developing this type of construction and did not introduce proposals for the appropriate organs, despite the fact that such potential did in fact exist.

In the control work being carried out at certain institutes of the bank, violations are being tolerated with regard to the instructions and rules established for the financing and issuing of credit for cooperative and individual housing construction. For example, the Dushanbe Branch financed the construction of four ZhSK dwellings, although the members of the cooperative did not supply a sufficient amount of their own funds for this construction. There were also incidents of credit being issued for the construction of dwellings, in response to a stated-obligation and with no instructions being provided as to the loan repayment schedule; for six of the dwellings under construction, the financing was begun in the absence of protocol decisions concerning approval of the estimated cost of the dwellings and the charter for the cooperative.

In this same branch the schedules for the utilization of loans, the current account numbers and the total amount of the quarterly payment were not indicated in the stated-obligations for the ZhSK's. During the course of arranging financing for many ZhSK dwellings, information was lacking on the obligations undertaken by all members of the ZhSK with regard to paying off the credit issued, reports were not available on approval of the estimates and the ZhSK charter, nor had they been sent to the enterprises and notices for the notary offices and organs of State Insurance were retained in the affairs of the branch. Similar shortcomings were observed taking place towards the end of last year in the Samarkandskaya Oblast office of the bank.

In 1976 and 1977 the Moldavian republic office formalized and issued loans to the manual and office workers of budgetary enterprises and institutes for individual housing construction and the capital repair of dwellings personally owned by workers. The loans were issued to the workers as borrowers in behalf of the bank and without permission by the chief of the department or the leader of the municipal administration. Checks carried out on the status of bookkeeping and accounting at cooperatives in Omsk established the fact that individual ZhSK members are not repaying their loans for 2 or more years. Effective measures are not being applied in this regard. A number of bank institutes are failing to carry out annual checks on the proper carrying out of the ZhSK obligations, nor are they taking stock of overall loan indebtedness for individual housing construction. This applies first of all to the Azerbaijan republic office.

In particular, great shortcomings exist with regard to controlling the return of credit issued for cooperative construction. Many institutes of the bank in Georgia are guilty in this regard. The practice has taken root here of individual cooperatives failing to repay their loans for many years. At times the overdue indebtedness for the Georgian SSR amounts to 70-75 percent of the total amount of debt outstanding. The republic office is not making sufficient use of the measures available to it for bringing administrative pressure to bear upon incorrigible defaulters.

By analyzing the developmental status of cooperative and individual housing construction and also the methods available for further improving the



financing and issuing of credit for such construction, the bank is promoting fulfillment of the great housing construction program planned for the Tenth Five-Year Plan. The tasks confronting the institutes of Stroybank with regard to the financing and issuing of credit for cooperative and individual housing construction require systematic control over the course of this construction and the adoption of the measures required to ensure the timely placing in operation of dwellings, the complete utilization of bank credit and also the timely repayment of such credit. The bank leaders must report the results of inspections to the local party and soviet organs and they must submit specific proposals aimed at correcting the shortcomings and ensuring fulfillment of the plans for placing cooperative and individual dwellings in operation. The development of cooperative and individual housing construction will serve to accelerate the solving of a task of tremendous social importance -- that of providing each family with a separate and well planned apartment or fine home.

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## CONSTRUCTION, CONSTRUCTION MACHINERY AND BUILDING MATERIALS

### INCREASED EFFECTIVENESS OF CAPITAL INVESTMENTS THROUGH IMPROVED PLANNING

Moscow FINANSY SSSR in Russian No 7, Jul 79 pp 41-42

[Article by Ye. M. Rodygin, chief of Planning-Economic Department of the Tashkentskaya Oblast office of Stroybank: "Improvements in Planning -- An Important Reserve for Raising the Effectiveness of Capital Investments"]

[Text] In the decisions handed down during the 25th CPSU Congress and in the materials of the December (1977), July and November (1978) plenums of the CC CPSU, mention is made of the need for a maximum concentration of labor, material and financial resources at underway and very important construction projects and for strict observance of planning, contractual, estimates and financial discipline. Regulated planning and improved organization for construction production had a very positive effect on capital construction in Tashkent and Tashkentskaya Oblast and on the mastering of the capabilities placed in operation: during the first 2 years and 9 months of the Tenth Five-Year Plan, a large number of projects of both a productive and non-productive nature were placed in operation. As a result, the total amount of fixed capital increased by more than 10 percent above the figure for the end of 1975.

During this period, capabilities for the production of mineral fertilizers at the Almalyk Chemical Plant and the Chirchik Elektrokhimprom Production Association were placed in operation and are being mastered successfully. Production capabilities were also placed in operation at the Almalyk Domestic Chemistry Plant, Uzbek Metallurgical Plant imeni Lenin, Tashkent plants for tractor and agricultural machine building, at numerous enterprises of the construction industry and also at enterprises engaged in the production of consumer goods.

For the purpose of improving the concentration of resources at underway and important construction projects, the office of Stroybank analyzed the plans for capital construction and furnished the ministries, departments and construction projects with the necessary recommendations. In accordance with its proposals, the task for placing fixed capital in operation, in the 1976 plans for capital construction, was increased by 57.9 million rubles,

in the 1977 plans -- by 18.5 million rubles and in the 1978 plans -- by 60.4 million rubles. At the same time, the construction of a number of projects was eliminated from these plans. This resulted from an absence of planning-estimates documentation, from recognition of the fact that their construction was inadvisable and from lack of sufficient resources and so forth. Thus, in 1976 21 construction projects and a project having an annual capital investment volume of 5.6 million rubles were eliminated, in 1977 -- 25 and 4.5 million rubles respectively and in 1978 -- 26 and 4.2 million rubles. These measures promoted improvements in the economic effectiveness of capital investments.

At the same time, we encountered incidents of incorrect planning in our practical work, with title lists already reflecting a dispersion of capital investments among numerous construction projects and facilities, extended schedules for construction duration and deliberate lowering of the estimated cost. Such planning disorganizes construction organizations, leads to a forced dispersion of labor, material and financial resources and in the final analysis it results in a lowering of the effectiveness of capital investments.

The approved title lists for a number of construction projects of USSR Minkhimprom [Ministry of the Chemical Industry], USSR Minsvyaz' [Ministry of Communications] (Promsvyaz' Plant -- for 60 months), Mintorgoviya [Ministry of Trade] for the Ukrainian SSR (Uztorgreklama Combine -- for 60, ice cream factory -- for 10 months), Glavtashkentstroy (repair-mechanical plant -- for 12 and a professional technical school -- for 20 months) and so forth called for a deliberate inflating of the duration of modernization and new construction.

In the case of 19 carry-over construction projects of union ministries, involving modernization work, and also six similar construction projects of republic ministries, 76.8 million rubles or 50 percent of the total established by the norms, including for enterprises of union subordination -- 66.8 million rubles (50 percent) and for enterprises of republic subordination -- 10 million rubles (51 percent), were not allocated for their completion in 1978. The largest underpayments occurred in the case of the Tashkent Chemical-Pharmaceutical Plant -- 1.1 million rubles (71 percent) and others.

For new construction work, 101.6 million rubles or 35 percent of the required amount were lacking for 51 construction projects, including for union ministries -- 63.7 million rubles (29 percent) and for republic ministries and departments -- 37.9 million rubles (53 percent). Large amounts of funds were lacking for carry-over construction projects of Minsgazprom [Ministry of the Gas Industry] for the USSR -- 11.6 million rubles (32 percent); the Mubarek - Navoi gas line -- 7.3 million rubles, Andizhan - Mayli - SU -- 200,000 rubles, plant for special industrial equipment -- 400,000 rubles, branch gas line to Dushanbe -- 4 million rubles; USSR



Minchermet [Ministry of Ferrous Metallurgy]: 2.4 million rubles, or 69 percent, -- department for steel enamelled dishware at the Uzbek Metallurgical Plant; Minlegprom [Ministry of the Light Industry] for the Ukrainian SSR: combine for leather fancy goods and sporting equipment -- 4 million rubles, or 69 percent and so forth.

Notwithstanding insufficient appropriated funds for the completion of carry-over modernization and the construction of new projects, the following were included in the 1978 plan: newly begun modernization of the Krasnaya Zarya Sewing Association, for which 600,000 rubles were allocated; the construction of new projects at an already active radio and television transmitting station and ATS [automatic telephone exchange] No 54/55 (2.3 million rubles), with a shortage of 400,000 rubles for this ATS and so forth. Under such conditions, Minavtoshosdor [Ministry of Automobile Transportation and Highways] for the Ukrainian SSR included six new construction projects in the 1978 plan, representing a capital investment volume of 3.4 million rubles.

The production capabilities of contractual construction organizations carrying out modernization and new construction work in Tashkent and the oblast conform to the tasks set forth in the capital construction program. However, as a result of the above-mentioned shortcomings in planning, the resources of these organizations are being dispersed, the duration of the construction work is being prolonged and the schedules for placing productive capabilities and projects in operation are being postponed repeatedly. The rates for construction production work are being adversely affected by weak construction organization in certain sectors. Such situations are being observed in connection with construction projects of the USSR MPS [Ministry of Railroads], Minneftekhimmash, USSR Minnefteprom [Ministry of the Petroleum Industry], Minkhlopkiprom [Ministry of the Cotton Industry, Minavtoshosdor, Minavtotrans [Ministry of Motor Transport], Minenergo and a number of others. It bears mentioning that the planned (for 1978) placing in operation of capabilities at individual construction projects is unrealistic, since sufficient capital investments were not allocated for the completion of construction and modernization.

The extended duration of construction work at many construction projects brought about a reexamination of earlier approved planning-estimates documentation. Of 38 ministries and departments reviewed, the increase in estimated cost resulting from a reexamination of documentation for 30 construction projects amounted to 154.7 million rubles, that is, 14.5 percent of the original cost, including for 19 construction projects of union subordination -- 140 million, or 16.4 percent and 11 construction projects of republic subordination -- 14.6 million rubles or 23.2 percent. The most noticeable increase in the cost of construction is observed in the case of projects of USSR Minkhimprom -- for 29.8 million rubles, or 30.2 percent of the original cost, USSR Mingazprom -- for 31 million rubles, or 2.7 percent, USSR Minneftekhimprom -- for 11.5 million rubles, or 37.8

percent and so forth. As a result of disruptions in the approved and planned schedules for placing projects and production capabilities in operation at 22 enterprises alone, the total amount of industrial output produced fell short of the desired amount by more than 1.2 billion rubles worth. Thus, the negative consequences of incorrect planning and weak organization of construction production took their toll.

The institutes of Stroybank in the city and oblast, during an analysis of financing documentation for construction projects in 1978, singled out incidents of incorrect planning and incomplete allocation of funds and reported these incidents to the appropriate ministries and local soviet and party organs. However, the situation is still changing very slowly. Unfortunately, the errors in planning have become chronic in nature. In the meantime, improvements in the organization of capital construction, even during the initial stage in the preparation of plans, tasks and title lists, serve as an important stimulus for accelerating construction work and intensifying the economic effectiveness of capital investments.

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## CONSTRUCTION, CONSTRUCTION MACHINERY, AND BUILDING MATERIALS

### TENANTS ENDURE UNFINISHED, POORLY MAINTAINED APARTMENTS

#### Apartment Repair Experiment

Moscow NEDELYA in Russian No 19, 7-13 May 79 pp 4-5

[Text] It has already been 5 months now that NEDELYA has been receiving letters in response to the article "To Repair an Apartment!" by P. Pravdin published in No 50 of last year, in which the author presented a detailed and substantial description of the difficulties associated with repairing a home. These were difficulties which the author himself experienced: It was an experiment in apartment repair to which he was assigned by the editorial board.

We will not get into an analysis of this interesting mail today, though it can be extremely useful to those who must solve the problems of housing repair (the mail has been reviewed twice already in NEDELYA); we will simply note that it continues to reconfirm that soviet and maintenance agencies have a great deal to do in order to organize housing repair requested and paid for by the public, and to fulfill the requirements of the 4 September 1978 USSR Council of Ministers decree "On Measures for Further Improvement of Operation and Repair of the Housing Fund."

Ministries and departments associated one way or another with the housing repair problem responded broadly and displayed deep interest in the NEDELYA articles. Today we publish their responses, mailed to us in the editorial board. Let us begin with the USSR Gosplan.

"In addition to mobilization of the efforts of the workers of personal services enterprises, the great tasks posed to the housing (apartment) repair service require further improvement of the organization and economic forms of this important sector of the economy. From our point of view NEDELYA did the right thing to raise this problem on its pages.

"Having examined the article 'To Repair an Apartment!', the division of local industry, cultural-personal goods, and personal services of the USSR Gosplan believes that the sharp criticism levied against the shortcomings in organization of apartment repair ordered and paid for by the public

obligates this service's executives in the oblast and republic to develop, within the shortest time possible, steps to eliminate the shortcomings indicated in the article, having in mind the authors's suggested ways for correcting them.

"In compliance with the USSR Council of Ministers decree "On Measures for Further Improvement of Operation and Repair of the Housing Fund," in 1975 the volume of housing (apartment) repair services paid for by the public was increased by 14 percent in comparison with the previous year's level. This assignment, the Gosplan's of the union republics report, is backed up by adequate production capabilities, manpower, and material and technical resources. It is a hard assignment, but it is realistic, and it may be completed on the condition that the necessary steps will be taken locally to correct all existing violations, to include those indicated in the NEDELYA article."

K. Dolotov  
Deputy Chief, Division of Local Industry,  
Cultural-Personal Goods, and Personal  
Services, USSR Gosplan

As we can see, an authoritative organization such as the USSR Gosplan has unfortunately been unable to come up with a more constructive response. Does this not create the impression that the Gosplan division responsible for providing personal services to the public, a division which it would seem to us should be the first to seek ways to solve problems associated with housing repair, remains apart from these problems for some reason?

One of the problems raised in NEDELYA and confirmed by reports from readers is the need for fundamentally improving the supply of construction materials, instruments, and sanitary engineering equipment to all services involved in housing repair. It is with great satisfaction that every reader will acquaint himself with the letter sent to us by the USSR Gossnab:

"The USSR Gossnab believes that the article 'To Repair an Apartment!' correctly reveals the existing shortcomings in this important form of services to the public.

"If we are to improve organization of apartment repairs ordered by the public, we would have to supply material and technical resources to the repair organizations. The volume of apartment repair services set by the national economic plan is supported adequately in relation to most materials and articles. However, the demand for some materials continues to be incompletely satisfied.

"The USSR Gossnab is taking steps (in relation to the materials it is responsible for providing) to insure a better supply of materials to the union republics for personal services.

"The governing board of the USSR Gossnab has ordered the All-Union Main Administration of Materials and Equipment Supply and Marketing to quarterly review, on the basis of the results of industry's work, the demand the union republic personal services divisions have for equipment, materials, and spare parts.

"It was pointed out in NEDELYA that many materials are unfortunately re-consumed when people move into new homes and remodel just-finished apartments to their own tastes. In this case they discard and destroy materials and articles already used. The Gossnab adheres to the opinion that apartments in new residential buildings should be trimmed with a consideration for the desires of future tenants. In this case all jobs costing more than the estimate must obviously be paid for in part by the public."

B. Yakovlev,  
Deputy Chairman, USSR Gossnab

In its experiment and its analysis of the repair realities NEDELYA showed how much money slips through the fingers of our housing and municipal services right into the pockets of resourceful craftsmen--those who in a sense fill the vacuum in the list of services which neither housing nor personal services divisions wish to render at the moment. Other problems requiring the attention of financial agencies were also touched upon. Here is the response by the USSR Ministry of Finances:

"The USSR Ministry of Finances has examined the article 'To Repair an Apartment!' published in NEDELYA and believes that the executive committees of the local councils of peoples deputies must raise the responsibility of construction and repair organizations for poor-quality and late fulfillment of apartment repair orders from the public. It is important to intensify control over job progress, and over compliance with the conditions under which the jobs are completed; additional steps must also be taken to expand these services and upgrade job quality.

"The ministries of housing and municipal (community) management and personal services of the union republics must take steps to improve labor standardization, achieve better surveillance over the use of working time, and keep records on consumption of materials for repair purposes by subdivisions of these organizations filling orders from the public."

A. Kamenskov,  
USSR Deputy Minister of Finances

This response is doubtlessly useful. It is a pity, however, that it contains no instructions to conduct a deeper study of the possibilities for augmenting the budgets of the executive committees with those assets which are for the moment being transferred from hand to hand--from the hands of the individual trying to receive a service into the hands of craftsmen who, alas, are not employed by state services. We would hope that financial



agencies would nevertheless show an interest in this problem. Also workers of housing and municipal services institutions. The RSFSR Ministry of Housing and Municipal Services reported its point of view to us:

"The RSFSR Ministry of Housing and Municipal Services has examined the article 'To Repair an Apartment!' and it believes that it correctly reflects the shortcomings in organization of apartment repairs paid for by the public. Special mention should be made of unsatisfactory material and technical support to organizations fulfilling these orders, and of the lack of high quality materials, motor transportation, and minor mechanization resources. In the ministry's opinion the situation is aggravated even more by the fact that there are a large number of organizations in different ministries and departments doing repair jobs for the public, as a result of which the materials and technical resources are dispersed, failing to reach the consumer in a number of cases.

"Considering the importance of enlarging the job volume, improving quality, and reducing the time to repair apartments on order of the public, back in 1977 the RSFSR Minzhilkomkhov (Ministry of Housing and Municipal Services) submitted, jointly with the RSFSR Minbyt (Ministry of Consumer Services), a proposal to RSFSR Gosplan and the USSR Gosstroy's Gosgrazhdanstroy [not further identified] concerning further improvement of the organization of apartment repair in response to orders from the public. It proposed, in particular, concentrating the entire apartment repair volume within the jurisdiction of the RSFSR Minbyt, for which purpose specialized republic-subordinated khozraschet 'Remstroybyt' repair and construction associations could be created. All specialized subdivisions of the RSFSR Minzhilkomkhov and other ministries and departments involved in tenant-ordered repairs could be placed within their administration.

"The responsibilities of building the production bases of the Remstroybyt associations were to be assigned to the RSFSR Minzhilkomkhov.

"These associations could be given the right to bring in organizations and enterprises of other ministries and departments to complete special jobs as subcontractors. Material-technical supply to Remstroybyt associations should be foreseen, in my opinion, by a separate item in the plans for economic and social development, with a consideration for satisfying the full demand for planned volumes of apartment repair and construction."

V. Ladygin,  
RSFSR Deputy Minister of Housing and  
Municipal Services

As we can see, workers of the housing and municipal services categorically declare their intention of getting completely out of the business of making housing repairs paid for and ordered by the public. Is this not a little too premature? We would obviously have to first develop the appropriate production capacities within the personal services system. The RSFSR Ministry of Consumer Services reports on how things are going in this sector:

"The RSFSR Ministry of Consumer Services believes that NEDELYA correctly reflects the shortcomings in organization and fulfillment of apartment repairs at public expense.

"The author of the article correctly notes that the main cause hindering development of this form of services is an unsatisfactory supply of construction materials. As an example the availability of materials required for repair of apartments and improvement of the homes of rural residents is a maximum of 45 percent for facing tiles, 40 percent for whitewash, boiled oil, and heating boilers, and 30 percent for pipeline fixtures. A number of materials enjoying a demand--water emulsion paints, enamels, and polyvinylchloride films simulating various wood grains--are not being provided to consumer services enterprises at all.

"The RSFSR Ministry of Consumer Services feels that if we are to increase the volume of apartment repair services rendered, we would have to first resolve the issue of providing material and technical support to the plans for repair and construction of housing at the request of the public not from operational funds but as an independent sector. We also agree with the proposal in NEDELYA for transferring some of the construction materials from the general market to organizations fulfilling orders from the public. Utilization of materials from the commercial market in rendering services to the public concerned with repair and construction of housing by specialized organizations would significantly increase commodity turnover and help to reduce the amount of such services rendered by private individuals for personal gain."

K. Likharev,  
RSFSR Deputy Minister of Consumer  
Services

We are also convinced that implementation of the government decision will encourage all concerned with this problem to abruptly change their attitude toward increasing the volume and improving the quality of services concerned with apartment repairs paid for and ordered by the public. It is especially important for the executive committees of local soviets to take a more objective stance in this regard. The editorial board intentionally left out the name of the place where the experiment at the basis of the article "To Repair an Apartment!" was conducted, but here is what the Moscow City Soviet of Workers Deputies Executive Committee Main Administration of Housing Services reported:

"The Moscow Main Administration of Housing Services believes that the author is entirely correct in his discussion of the shortcomings present in the organization of apartment repairs paid for by the public, including the shortcomings suffered by the housing services administration's Moszhilremont Trust.

"Because of serious violations in selection and placement of personnel made at the time of formation of the trust's subdivisions, cases of negligence

and carelessness on the part of individual workers eliciting the valid reproaches of clients are still encountered in some areas.

"As a rule these cases do not remain unpunished. In particular, orders of Special Administration No 11 dismissed Section No 5 foreman V. A. Radchenko and section foreman I. K. Mikheyenkov, and Section No 5 worker V. M. Yaskin was fired on the basis of Article 33, Paragraph 4 of the RSFSR Labor Code.

"Other measures of influence are also being implemented, and educational work in the collectives of specialized administrations is improving.

"The Moscow Main Administration of Housing Services has developed organizational and technical measures which, when implemented, will help to eliminate the shortcomings noted in NEDELYA, to significantly increase the volume and quality of apartment repairs, and to raise the level of services rendered to the residents of Moscow.

"The latest trimming materials and minor mechanization resources are to be allocated for apartment repairs. Laborers, engineers, and technicians will be taking advanced training courses. New worker dormitories will be organized, and the level of educational work in the collectives of the specialized administrations will be raised. The forms and methods of socialist competition will be improved.

"All of this will doubtlessly be of significant assistance to solving the problems, raised in NEDELYA, of developing and improving apartment repair services."

V. Shcherbakov,  
Chief, Moscow Main Administration of  
Housing Services

What can we say in response? Only one thing: This is a good example for others. We repeat nonetheless that the article did not name the city in which the "repair experiment" was conducted.

Now let us summarize what has been said. What can we see from the responses of the ministries and departments upon which solution of problems associated with repairing our homes depends? First of all their responses attest to the importance and timeliness of the discussion raised by the newspaper. They imply that the executives of these organizations are interested in solving the repair problems as quickly as possible. Finally, these responses afforded a possibility for surveying the complex housing repair problem from different points of view, and to compare different opinions and viewpoints.

Were we to attentively analyze them and sum up the opinions of the hundreds of readers who sent their letters to NEDELYA, we would have to demand the following:

Organizationally, materially, technically, and financially strengthen the corresponding subdivisions of the system of consumer services and housing and municipal services.

Organize provision of high-quality construction materials to repair organizations on priority, bringing their uneconomical use to an end.

Decisively raise the quality of management of the entire complex of repair jobs--from writing up the order to its acceptance by specialists and executives of personal services.

Intensify educational work among repairmen, and raise their responsibility for the honor of the collective they represent.

If publication of the article "To Repair an Apartment!", the discussion of the problem by readers, and today's responses to criticism will help solve these problems, the editorial board of NEDEL'YA will feel that the objective posed by the "repair experiment" has been reached.

#### Unfinished Apartments

Moscow KRASNAYA ZVEZDA in Russian 13 Jul 79 p 4

[Text] Maj V. Knyazev, Red Banner Baltic Military District--If we are to believe the official documents, the apartment complexes on Zeltinyu Street in Riga were put into operation at the end of December 1978. But there could have been no discussion of housewarming parties, since construction had not been completed.

"You will have to move in later," workers of the housing operation service said to the future residents. "It is for your own good. There are still some things that need to be done."

The builders gave their solemn promise to finish in another 2 months.

The 2 months passed. But once again the moving-in day was postponed. The future tenants did not complain an especially great deal: They felt certain that the military builders would soon finish what had to be done "for their own good." And, finally, in early April the people were given the possibility for crossing the thresholds of their apartments.

But the joy was premature. A linoleum-covered floor was warping in one of the apartments. Rather than being firmly fastened, the wall boards were standing free.

In another apartment the doors of built-in cabinets were crooked. Some of the cabinets were not even fastened down, simply being rested against the wall. There were still some tiles missing in the kitchens. Wallpaper in some rooms was sprayed with paint and lime. Glancing at the ceiling, a



new resident saw water stains in one of the rooms. "Perhaps the upstairs neighbors flooded their apartment?" the thought crossed his mind. But water had not been connected to the building. It turned out that rain water gets into the apartment through poorly plugged seams between the concrete slabs. In a moment of weakness a tenant leaned against a door frame, and then barely managed to break his fall by grabbing the wall. The frame and door collapsed into the room. It was supported, it turned out, only by the glued ends of the wallpaper.

It would not be difficult to imagine the sort of wishes and language the new residents wanted to express to the military construction collectives headed by Engineer-Colonel M. Agranat, Engineer-Lieutenant Colonel A. Tsirulis, and by construction section supervisors Ye. Parkhomenko, Engineer-Major V. Motin, and Foreman V. Mudragel'.

The first tenants to move in enjoyed one of all of the promised conveniences-- cold water. Among the hotly awaited blessings was electricity, which was 2 months in coming. There was no hot water or gas. The tenants little by little forgot the existence of an elevator. In a word, from the moment the tenants moved in, they began paying for gas and hot water they did not have.

We often exchange opinions during breaks in our efforts at finishing the construction work. One of my neighbors said:

"I don't know what the builders were thinking about when they did this, but surely it was not about the people that were going to have to live here."

The residents themselves were forced to scrounge up their own carpentry tools, paint brushes, and so on.

Trimming jobs are still in progress in the apartments. They are being done by the tenants themselves. Until late at night on weekdays, and from dawn til dusk on Saturdays and Sundays. The people are relaying the floors, plastering, painting, whitewashing and rehanging the wallpaper. "Finished" half a year ago, the buildings recall new construction sites.

But while a number of the loose ends could be tied by the new residents themselves, absence of gas and hot water causes serious alarm. The military builders assure us that we will soon have them. It turns out that city organizations have not certified the heating plant for operation due to some loose ends. The internal and external gas pipelines are not being accepted for the same reason. One naturally asks: How could the state commission have certified this "half-baked" building as ready for operation?

How did the military builders themselves assess the results of their activities? Section chief Comrade Parkhomenko answered:

"Of course there are loose ends. But you must consider what our specialty is."



That is an obscure answer. From my point of view the problem lies not with specialties but with the loss of a sense of responsibility, with absence of a conscientious attitude toward one's responsibilities.

#### Overdue Overhaul

Moscow MOSKOVSKAYA PRAVDA in Russian 29 Jul 79 p 2

[Text] D. Mikhaylov--Every time it rains, the tenant of apartment 70 of building No 44 on Leningradskiy Prospekt V. Chulkov heads for the attic. Up here he has an entire arsenal--buckets and troughs, and chutes and drip pans. If he manages to place his water collectors and drains beneath each stream in time, his apartment stays dry. But this does not always happen.

The situation is no better with his stairwell neighbor in apartment 71, L. Tamarchenko.

Even from the outside the building is not much to look at. Entire sections of drain pipe have collapsed, or they are hanging precariously. During the rains the water courses over the walls into the lower story windows. There are many other woes as well. And the reason for this is that the building has been in operation without overhaul for more than 40 years now. Still, it is not the worst of ZhEK-5 [Housing Operation Office No 5], Housing Repair Division, Moscow Housing Operation Administration.

Building No 23 on Verkhnyaya Maslovka Street was built back in 1930, and it has still not undergone major overhaul. The tenants have not been resettled despite the fact that the rayon epidemiological station condemned the building as unsuitable for occupancy. Mishaps often occur here in winter, and sometimes there is no water for 3 days at a time.

In fall of last year the attics of building No 2, Complex 1 on Krasnoarmeyskaya Street began leaking. They were repaired but the builders "forgot" to lay the roofing material. As a result in a few months the leaking in some apartments was so bad that paint came off the walls and plaster crumbled away. All systems--heating, lighting, water, electricity--have become unusable. So what is to be done? All that has been planned for this year is to replace some of the roofing and paint the facade.

I can cite very many such examples.

The party organization and the building committees of ZhEK-5 have been fighting an unsuccessful battle for overhaul over a period of many years. Ya. Vayntraub, the party organization secretary for the section containing the buildings named above, has a bulging file which has been named, with bitter irony, the "housing fund repair file." It contains dozens of letters, descriptions, documents, resolutions, decrees, and orders from various organizations that have not moved matters forward even a step. Consider

also that ZhEK-5 contains three such sections and, correspondingly, three such files.

B. Shlyak, chairman of the building committee representing this section, has tired of beating the doors of the ZhEK: There is no reaction here any more to signals from the public.

Orders for selective overhaul of some systems in hazardous condition were sent to the higher organization. But the office has no intention of performing the current repairs with its own resources. This is explained by a shortage of personnel--roofers, fitters, carpenters, and so on.

Thus the ZhEK is unable to do current repairs and the repair organization cannot manage with overhaul. This year part of the piping and roofing was to be replaced and the drives and the facades of some of the buildings were to be improved. But even selective overhaul turned out to be more than anyone could handle. It has now been several months since the plan has not been completed.

This is not the first year that such a situation has been in existence. It is explained by the fact that neither the ZhEK nor the Communal Housing Department nor the Moscow Housing Operation Administration has a resettlement fund. It would seem, however, that the buildings could be transferred to the rayon executive committees, which do possess such a fund. But the department does not have the strength to take such a step. Let me clarify this with an example. Ye. Pryamostanov, chief of the Frunzenskiy Rayon Housing Administration, says that any building could be approved right away if it is connected to the combined dispatch service and if the building is up to code. But the ZhEK-5 does not have a dispatch console, the condition of the buildings leaves something to be desired, and no changes are in sight.

Does this mean that there can be no solution? Yes, if the housing department and the executive committee concern themselves only with their own interests. On the other hand they could cooperate on an equitable basis: The executive committee could offer its resettlement fund while the department could finance and conduct the overhaul. There could be other ways to solve the problem as well. But whatever the choice, both sides benefit.  
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## ELECTRONICS AND PRECISION EQUIPMENT

### CHARACTERISTICS OF THREE-PROGRAM LOUDSPEAKERS DESCRIBED

Moscow VESTNIK SVYAZI in Russian No 4, Apr 79 pp 21-22

[Article by Candidate of Technical Sciences V. Ya. Dzyadchik, laboratory head, NIIR, and G. S. Skrobot, chief designer: "Three-Program Loudspeakers: What They Should Be Like"; photographs not reproduced]

[Text] The three-program wire broadcasting (TPV) system is winning increasing popularity in spite of the great extent of television and radio broadcasting. The output of three-program loudspeakers (GT) is increasing every year (450,000 in 1978), but commercial organizations' orders for them are still not being completely filled. Investigations indicate that public demand for three-program loudspeakers is increasing and will reach 900,000 a year by 1980. During the next five-year plan, the increase in demand will continue.

The task of increasing output of three-program loudspeakers in accordance with demand is being accomplished mainly by bringing several plants from different ministries into their production. Modern circuitry and designs which will allow fulfillment of all existing standards have been made available to these plants. The previously produced Riga, Avrora and Mayak (which are in quality class 2) do not meet the current requirements of GOST 18286-72 as regards sound pressure and input resistance during operation on the first channel.

This shortcoming has been eliminated in all the new models in quality class 2: the Mayak-202, the Elektronika-201, the Elektronika-202 and the Minsk-201.

The main electrical and acoustic characteristics of the three-program loudspeakers are shown in the table. They use a built-in amplifier for reception of the first program. This design has significant advantages. During loudspeaker operation, it gives a higher and more stable loudness on all three channels, and the significant weakening of the first-program signal occurring in the wire broadcast lines, which according to existing norms may be up to 4 dB, is compensated by it. The industrial enterprises are gaining the capability to produce quality class 2 amplifiers without deviation from the standard on the basis of ordinary mass-produced electrodynamic voice coils [golovka] with a frequency range of 100-10,000 Hz.

Parameter	Mayak-202	Minsk-201	Elektro-nika-201	Elektro-nika-202
Nominal frequency range, Hz, min	100-6300	100-6300	100-6300	100-6300
Variation in sound pressure-frequency characteristic, dB, max	15	15	15	15
Average sound pressure, Pa, min	0.25	0.30	0.25	0.30
Sensitivity:				
High-frequency channels, mV, min	250	250	250	250
Low-frequency channels, basic mode, V, min	19	19	19	19
Supplementary mode, V, min	30	30	30	30
Rated output power, W, min	0.25	0.5	0.25	0.3
Impedance, low-frequency channel, 20,10,000 Hz, ohms, min:				
Basic mode	10,000	12,000	10,000	12,000
Supplementary mode	2,800	4,700	2,800	4,700

The load placed on station amplifiers in the wire broadcast network is being significantly decreased, since the input impedance of the new loudspeakers is several times as high as in those previously produced.

The above fact is extremely important, since the loudspeakers acquired by the public are generally not installed in place of existing single-program loudspeakers, but in addition to them. Accordingly the increase in input impedance in these loudspeakers and their uniformity in the quality class 1 band (50 Hz-10 kHz) of the wire broadcast system are timely and much needed.

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